

Marine Research Committee Administrative History

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The sudden depletion of sardines (*Sardinops sagax*) from California waters in 1946-1947 alarmed the California fishing industry. The California Legislature approved a special tax on commercial sardine landings at the request of fishing industry leaders and scientists to fund scientific research into the problem. The tax funds were administered by a committee called the Marine Research Committee. It was composed of nine members appointed by California Governor Earl Warren, five representing the industry, one representing the public, one from California Fish and Game Commission, and two from California Division of Fish and Game. Fishing industry expert Julian G. Burnette chaired the Marine Research Committee from its establishment in 1948 until February 28, 1967. Administrators from the Scripps Institution of Oceanography, notably Harald Ulrik Sverdrup and Roger Revelle, participated in the early discussions that led to the formation of the Marine Research Committee and subsequently played an important role in the scientific program.

The Marine Research Committee established a Special Technical Committee composed of scientists in 1948 to oversee the work at sea. The Technical Committee was chaired by Robert C. Miller. The Technical Committee devised a program which became known as the California Cooperative Oceanic Fisheries Investigations (CalCOFI). CalCOFI continues in operation today. CalCOFI took a broad multidisciplinary ecological approach to the study of the depletion of the sardine in California waters. This included investigations of physical and chemical conditions in the sea and studies of organic productivity of the sea and its utilization assigned to the Scripps Institution of Oceanography; studies of spawning, survival, and recruitment of sardine, undertaken at the U.S. Bureau of Commercial Fisheries; and studies of stock availability, abundance, distribution, migration and behavior, and fishing methods undertaken by California Fish and Game. Stanford's Hopkins Marine Station and the California Academy of Sciences were also participants in CalCOFI studies. All the participating agencies cooperated to study dynamics of the sardine population and fishery.

CalCOFI used a fleet of ships including R/V E.W. Scripps and other vessels of the Scripps Institution of Oceanography, and converted federal vessels including M/S Black Douglas, M/S N.B. Scofield, and M/S Yellowfin. These ships collect oceanographic data at one hundred and twenty-two stations over a large area of the ocean off the coast of California known as the California Current research area. Data was collected on a monthly basis for the first decade, and continues today on quarterly cruises.

CalCOFI sought to determine if variations in stock sizes of sardine and other fish were due to overharvesting, or simply a natural variability. During its first two decades, CalCOFI was successful in documenting the life cycle of the sardine, identifying its position on the food chain, describing its spawning habits and grounds, its schooling habits and developing methods to estimate the numbers of the population including age composition of juveniles and adults. CalCOFI's investigation of fishing grounds contributed new knowledge to other fisheries, including anchovy, jack mackerel, and hake. CalCOFI is also credited with some significant discoveries in geology and physical oceanography, most notably the discovery of a pattern of ocean warming called El Nino which significantly impacts the climate of the west coast. These accomplishments were overshadowed by continued disagreements and uncertainty about the causes of the depletion of the sardine, which had virtually disappeared from California waters by the early 1960's. The Marine Research Committee was often the focus of debate between groups advocating applied research which specifically addressed sardine depletion, and others which championed pure research with broad ecological goals.

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